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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/436,618	11/09/1999	MICHAEL A. B. PARKES	200352	6893

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EXAMINER

ALI, SYED J

ART UNIT

PAPER NUMBER

2127

DATE MAILED: 03/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/436,618

Applicant(s)

PARKES ET AL.

Examiner

Syed J Ali

Art Unit

2127

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 November 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

1. This office action is in response to the amendment filed November 1, 2004.

Claims 1-38 are presented for examination.

2. The text of those sections of Title 35, U.S. code not included in this office action can be found in a prior office action.

Claim Objections

3. **Claims 1 and 13 are objected to because of the following informalities:**

- a. In line 1 of claim 1, "A method of" should read "A method for".
- b. In line 1 of claim 13, "A method of" should read "A method for".
- c. In line 2 of claim 13, "having cache" should read "having a cache".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. **Claims 1-38 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

5. Where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process*

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Control Corp. v. HydReclaim Corp., 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999). The term “server” in claims 1-38 is used by the claim to mean “one or more computer-executable functions”, while the accepted meaning is “a processing element” or “a computer providing services for other computers connected to it via a network”. The term is indefinite because the specification does not clearly redefine the term.

It is noted that Applicant indicates, “Each server defines one or more computer-executable functions for performing a particular task in the overall program” (Specification, p. 6 lines 4-5). However, this language does not clearly redefine the term “server”. It is unclear whether the server is defined as being one or more computer-executable functions, or if the computer-executable functions are formed or generated by some function of the server. For example, the server could be working in conjunction with one or more computer-executable functions or it could contain the definitions for the computer-executable functions. The intended meaning of “server” is contradictory even across the claims themselves. For example, in claim 1 a server “defines a computer-executable function”, whereas in claim 13 a server is defined “for each sub-task”. It is unclear whether the server is defining or being defined. The specification does not contain the specificity needed to satisfactorily redefine “server”, which has an accepted meaning in the art. Alternative terminology should be used that more clearly indicates what the purpose or function of a “server” is, without using terms that have a well-established meaning in the art. Since the definition of “server” provided in the specification is inadequate, the claims do not clearly specify what role the “server” plays.

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6. As per claims 1, 13, 23, and 26, they recite servers being “optimized” to execute in cache. Also, claims 1, 23, and 26 recite manipulating global data to carry out various sub-tasks. The claims are incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. There is no indication of how the global data is manipulated or exactly what meaning “manipulating” is intended to convey. For example, the global data might be needed to carry out the sub-task, or the global data might somehow be changed to facilitate the execution of the sub-tasks. Additionally, the “optimization” step does not indicate any element that actually reflects an optimization. The claim says that the servers are “optimized to execute in cache” such that “global data is given priority over user context data”. It isn’t clear whether the optimization is related to the servers being executed in cache, the assignment of priority to global data, or some other optimization. The limitations render the claims indefinite because they could be interpreted in multiple ways.

7. As per claims 1, 13, 23, and 26, the limitations that indicate the servers “execute in cache” are not supported by the technology. That is, it is well known that cache functions as a memory unit designed to speed up access to data, not to serve as a processing element. The phrasing of these limitations do not clearly set out whether the servers are optimized to execute while their necessary data is stored in the cache, or if the server is supposed to actually execute inside of the cache. The former interpretation corresponds to the accepted meaning of a cache, while the second interpretation does not.

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8. As per claims 7-8, 19, and 33-34, the claims recite retrieving a node from memory and storing the node in the cache. It appears as though Applicant intends the claim to indicate that the data associated with the node, or the information stored within the node, are retrieved from a memory and a copy is stored in cache. However, the specific claim language is drawn to removing the node from the memory and relocating the node to the cache. The claims should be amended to clearly indicate what data, if any, is retrieved from memory and how the data is moved into the cache.

9. As per claim 28, the claim is phrased in such a way as to present what should be an independent claim as a dependent claim. Any claim which is in dependent form but which is so worded that it, in fact, is not a proper dependent claim, as for example it does not include every limitation of the claim on which it depends, will be required to be canceled as not being a proper dependent claim; and cancellation of any claim depending on such a dependent claim will be similarly required. The applicant may thereupon amend the claims to place them in proper dependent form, or may redraft them as independent claims, upon payment of any necessary additional fee. MPEP §607.

10. The following terms lack antecedent basis:

- a. In lines 7 and 10 of claim 8 and lines 8-10 of claim 34, "the cached node".

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. **Claims 13-27 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.**

4. As per claim 13, a “method of writing a computer program” is recited. The language of the claim raises a question as to whether the claim is directed merely to an abstract idea that is not tied to a technological art, environment, or machine which would result in a practical application producing a concrete, useful, and tangible result to form the basis of statutory subject matter. A method of writing a computer program is not necessarily tangibly embodied in a manner so as to be executable.

5. As per claims 23 and 26, the claimed “data structure” is non-statutory for at least the reason that it is not tangibly embodied in a manner as to be executable. The claims are directed solely to non-functional descriptive material, as the only portion of the claims that include execution on hardware are included in an intended use statement.

6. As per claims 14-22, 24-25, and 27, they are rejected for at least the same reasons as their parent claims, as they fail to present any limitations that resolve the deficiencies of the claims from which they depend.

Response to Amendment

7. The declaration filed on November 1, 2004 under 37 CFR 1.131 is sufficient to overcome the Arimilli et al. (USPN 6,330,643) and Ghodrat et al. (USPN 6,425,021) references.

Response to Arguments

8. Applicant's arguments with respect to claims 1-38 have been considered but are moot in view of the new grounds of rejection.

Allowable Subject Matter

9. **Claims 3-5, 7-9, 16-17, 19, 25, 30-31, 33-35 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.**

10. The claims indicated as allowable subject matter reflect an actual manipulation of data, spelling out the functionality associated with the various servers. They provide a context indicating how the servers use the global and user context data. The ambiguities associated with the independent claims, e.g. failing to indicate what role a "server" plays and how the global data is manipulated, are somewhat alleviated by the functions described in the allowable dependent claims. Whereas the independent claims merely manipulate data to perform a sub-task, the allowable dependent claims show how the global data and user context data work together to achieve a result that facilitates storing data in cache during execution to improve performance.

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Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Syed J Ali whose telephone number is (571) 272-3769.

The examiner can normally be reached on Mon-Fri 8-5:30, 2nd Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai T An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Syed Ali
February 17, 2005



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